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Reading the “Voice” of the Customer: A Content Analysis of Consumer Reviews

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Reading the “Voice” of the Customer: A Content Analysis of Consumer Reviews

Online consumer reviews are an increasingly prominent source of interpersonal influence on consumer preferences. We discuss similarities and differences between these reviews and conventional word-of-mouth sources. A content analysis of 180 online consumer reviews reveals important insights for both academics and managers into the consumer search and influence processes.

In the 1990s, the Internet revolution spawned many new forms of consumer information and education, creating fertile sources of research material for marketers and academic researchers. One such relatively new and little-researched phenomenon in the virtual marketplace or *marketspace* (Kotler, Jain and Maesincee 2002) has been the growth of online consumer review sites. On such sites, consumers write detailed accounts of their experiences for the primary benefit of other consumers who might be seeking to make purchases and/or gather information in the same product or service categories. For marketers and researchers, these online reviews present a sustained written record of pre-purchase reasoning and post-purchase experience from many individual consumers.

The ability of consumers to voice, indeed broadcast, their opinions about their experiences with products and services began in the 1980s with the Usenet, a worldwide electronic network of discussion groups, now archived at google.com. Through Usenet, consumers secured a platform to air opinions, relay positive and negative experiences and respond to other users' questions (Notess 2000). Progressively over the last decade, consumers have begun to tap the enormous potential of the Internet for less costly but more extensive information search, resulting in an explosion of millions of electronic fora such as discussion boards, message boards, communities, clubs, e-mail groups, etc. A natural extension has been the growth of websites such as www.consumerreview.com, www.reviewcentre.com and www.epinions.com on which such information sharing has now been systematized. As a result, we now have several sources on the web where we can freely listen in on the "voice of the customer."

Product manufacturers, marketers and managers have relied on focus groups, individual survey responses and customer interviews as sources of consumer feedback. While helpful, these feedback sources have never had the authenticity or immediacy of unmoderated word of mouth communication between fellow consumers. Now, consumer reviews have

become a promising variant to word of mouth (WOM) behavior. They are relatively immediate, often available soon after a product is launched, and dynamic, the reviews increasing in number as Internet penetration increases. Best of all, they are thoughtful reflections of consumers' experiences, written in their own words and organized in their own individual styles. For academic researchers and marketers, the great advantage of consumer reviews, relative to other types of word of mouth (WOM) behavior, is that they are visible and relatively permanent. Thus, notwithstanding their recent inception, consumer review websites are a rich source of free marketing research data, beginning to transform the powerful word of mouth communications that consumers have always sought in the past (Arndt 1967; Duhan et al. 1997).

Consumer reviews have much potential as a site for the academic study of information search and influence between consumers. On sites such as www.epinions.com where consumers are rewarded for reviews in recognition and "e-royalties," (electronic points that translate into payment on reviews which consumers deem helpful),¹ reviewers have an added incentive to be helpful. Presumably, the information reported by consumers is precisely the kind of information that they feel would be useful to other consumers. Reviewers may reveal what attributes are important to them, what comparisons they made before their choice, and what they liked or disliked about their eventual experience with the product.

In this paper, we offer a framework for the analysis of consumer reviews. We contrast consumer reviews with other existing sources of independent product information such as word of mouth and third party magazines such as *Consumer Reports*, perceived by consumers to be comparably unbiased, relative to marketer-sourced communications such as advertising and corporate web pages. We argue that consumer reviews offer unique

¹ See www.epinions.com/help/faq

information to other consumers that cannot be subsumed under these other consumer-driven forms of product information. We then draw on two largely independent streams of research – information economics as applied to consumer search, and persuasion strategies that generate influence, to design a coding framework for a content analysis of consumer reviews.

Further, our research seeks to answer the following empirical questions:

- What is the primary product-related information that consumers seek to convey in online consumer reviews, i.e. what is the primary “content” of consumer reviews?
- What are the persuasive strategies that consumers use in these reviews to inform and influence readers, i.e. in what “form” are consumer reviews delivered?
- How do both the content and form of these word-of-mouth communications differ across types of product categories —products in the introductory stage of the product life cycle versus mature products, and durables versus non-durables?
- What specific features of both content and form in these reviews do readers of these reviews find most helpful?

We answer these questions through a content analysis of a large random sample of consumer reviews, selected across a variety of product categories, at one of the premier review sites, www.epinions.com.

THEORETICAL FRAMEWORK

We begin by providing a critical comparison between consumer reviews and word of mouth behavior because as Internet penetration increases, consumer reviews could eventually supplant WOM as the major social influence on consumer decision-making, at least among non-marketer driven sources of information.

Word Of Mouth Behavior

Word of mouth (WOM) from family and friends (Arndt 1967; Claxton, Fry and Portis 1974; Newman and Staelin 1973) has been a potent, long cherished source of consumer

information, powerfully dictating product and brand evaluation and adoption. In contrast to manufacturer/seller sources like product advertising or labeling, or even independent, third-party sources like *Consumer Reports*, information gathered by fellow consumers wields significantly greater influence because of its vividness (Herr, Kardes and Kim 1991) and presumed impartiality (Eagly, Wood and Chaiken 1978).

We note that past research on word of mouth behavior has probably been limited by the inherent “slipperiness” of the phenomenon: concurrent study of word of mouth behavior may affect the very behavior being studied, while retrospective reporting of word of mouth may be biased or incomplete. Previous empirical research on WOM has hence usually been limited to outcomes of the WOM process, such as subjects’ own assessments of whether they would engage in word-of-mouth activity (Heath 1996) or referrals in a single product category (typically using retrospective memories of referrals as in Arndt 1967, Brown and Reingen 1987 and Duhan et al 1997). Scale development has also sought to measure word-of-mouth activity (Harrison-Walker 2001) and “susceptibility to interpersonal influence” (Bearden, Netemeyer and Teel 1989).

Investigation of the actual content and form of WOM, offline or online, has been quite limited, a notable exception being a study of WOM communication among adoption categories for a food category (Belk and Ross 1971). Product innovators used WOM to convey and receive extreme evaluations (either positive or negative) while later adopters used WOM only when product evaluations were low. In a study that ties online influence to information search, Chatterjee (2001) found that consumers choosing a familiar retailer online were less likely, relative to consumers choosing a retailer based on price, to be negatively affected in purchase intention and evaluation of the retailer’s reliability. But when relying solely on an Internet retailer chosen on the basis of price, consumers were more likely to opt for greater information search and therefore seek online consumer reviews.

However, two important differences between conventional word of mouth communications and the Internet analogy of WOM in consumer reviews should be noted. Traditional WOM sources typically possess personal knowledge of a specific recipient's preferences, or past experience with a product. In online reviews, relative anonymity exists. The author's identity is known only if the author chooses to reveal it. Consequently, the onus is on the author of the review to establish his/her own expertise and specify the source of that expertise. Further, in using a broadcast medium, the review author may choose to clarify the intended audience for the review, in terms of the type of consumer segment or usage situation.

Secondly, a typical recipient of WOM can immediately ask questions and seek clarification; in contrast, most consumer review sites possess limited interactivity, tending to be like one-to-many "broadcast" media (like *Consumer Reports* magazines). However, authors sometimes make references to earlier reviews, modify their reviews at a later stage (in reactions to other reviews posted later), and provide e-mail links so that readers could potentially contact them.

Still, in many ways, the critical similarities between WOM and consumer reviews outweigh the differences. In both cases, the source is not paid by the manufacturer, so recipients have the expectation of an unbiased source. Also, the "voice of the customer" that speaks in both instances (the feeling that "this is another consumer like me"), lends authenticity to the content (in contrast to magazines like *Consumer Reports*, where there may be no similar identification with a laboratory tester who reports on the product). Verifying this positive evaluation of consumer-driven sources of information on the internet, Bickart and Schindler (2001) found that consumers who browsed through consumer driven fora (bulletin boards, internet fora) for information reported greater interest in the product after the

experience, than did similar consumers who accessed corporate web pages for similar product information.

Table 1 summarizes the similarities and differences among consumer reviews, traditional WOM, and other third-party sources of information such as independent consumer-oriented publications like *Consumer Reports*.

INSERT TABLE 1 HERE

We now review each component of our framework for the content analysis. To better understand this powerful new phenomenon against the backdrop of consumer behavior accounts of WOM, we pull together work on economic concepts of consumer search and psychological theories of persuasion. Constructs from information economics, especially as they pertain to consumer search, are used to guide our coding of the content of consumer reviews. As we examine the influence techniques used by consumer reviewers, we draw on persuasion studies to explicate the form of these reviews.

This paper hinges theoretically on our proposal that reviewers write to satisfy two communicative goals: informativeness and influence. The informativeness goal is met as reviewers describe their experience with a specific brand and summarize their response to the brand's performance, presumably with a focus on the kinds of information that they feel would be useful to their readers and likely unavailable from other sources. Since the context of these reviews is one in which they have no social tie to the reader (beyond a shared interest in the product category), they may have a second goal—to persuade the reader that they are a credible and worthy reviewer—and that their recommendations (positive or negative) regarding the reviewed brand ought to be considered seriously. Thus, in consumer reviews, we might expect authors to make a greater effort to describe who they are and justify their self-rating of expertise in the category, so as to attract the serious consideration of their readers.

It is useful to note that the “inform-influence” goals of a reviewer may be correlated in practice but are conceptually orthogonal: reviews that are informative need not be persuasive, as in the case of a review that chronicles a balanced list of pros and cons, but fails to assert a particular viewpoint. Similarly, reviews intended to be persuasive, such as those that are overly positive, may not be informative.

Consumer Search

How much consumers search, what they search for, where they search, and the role of marketer and non-marketer sources of search information have all been important research questions in the last few decades. Consistently, three major findings have emerged from these research streams:

1. Consumers usually search for less information than is predicted by normative models of information search. For example, consideration sets are often much smaller than those predicted by rational cost-benefit models (e.g. Newman and Staelin 1972).
2. Consumers find information search increasingly more challenging because straightforward product comparisons have been made more difficult by decreased product differentiation and increased product replacement or modification, often taking place in six-month cycles (Hagel and Singer 1999). Often search attribute information is not easily comparable across brands or across retailers (Bergen, Dutta and Shugan 1996).
3. Even though advertising, the most pervasive form of marketer-driven communication, reduces the cost of information search (Nelson 1974), consumers remain instinctively skeptical of advertising.

Precisely because consumers do not search extensively, find consumer search complex and are skeptical of advertising, consumer reviews may become an integral component of the

search process. Independent of manufacturers and sellers, online reviews are easy for consumers to access and compare to accelerate information search.

What kinds of information do consumers transmit to each other based on their product experiences? We developed our coding of the content of these reviews around economic theories of information search. In his widely used taxonomy of product information, Nelson (1970, 1974) defines *search qualities* as those product features that a consumer can determine by inspection prior to purchase, such as purchase price, physical dimensions and product functions. *Experience qualities* are defined as qualities that require actual use of a product, such as the ease of use with a video camera or comfort experienced with a pair of shoes. Ford, Smith and Swasy (1990) note that manufacturer-driven sources of information trigger less skepticism about search attribute information, which is readily available and objectively verifiable, than about experience attributes that are more subjective and less generalizable. We expect that authors of consumer reviews will attempt to provide information that fellow consumers are unlikely to get easily from manufacturer-driven sources. We surmise that experience attribute information will therefore be emphasized in consumer reviews. Reviewers might equally offer evaluations of manufacturer claims, comparisons of the specific brand to other brands and versions, and give advice on which important product attributes are important, and the compatibility of the brand with other specific complementary products.

Previous research has documented that the amount of pre-purchase search, and hence of the amount of information sought, is different for different types of product categories (Beatty and Smith 1987; Dedler, Gottschalk and Grunert 1981, Swaminathan 2003). We focus on two important characteristics of product categories – stage in the product life cycle (introductory versus mature stage) and type of purchase decision (routine buying situations for non-durables versus extensive problem-solving decisions for durables). Newer products

are less familiar to the consumer audience at large. Durables and non-durables vary in the financial and product performance risk involved in making the right decision (Urbany, Dickson and Wilkie 1989). Hence we might find systematic differences in the amount and type of information found in consumer reviews.

Persuasion Theory

One important difference between online consumer reviews and conventional WOM behavior is that there are negligible, if any, social ties between the reviewer and the recipient of consumer reviews. Any evaluation, therefore, of reviewer expertise, credibility or helpfulness, arises from the reviews themselves. How do reviewers build credibility in order to persuade a recipient about their product recommendation?

The pioneering work of Friestad and Wright (1994, 1995) provides useful insight into the procedural knowledge that consumers develop and draw on, quite informally, in the course of daily living, thereby comprehending and using persuasion in varied domains (e.g. differentiating advertising from other program material on TV and radio). In our coding of the reviews, we surveyed a range of frequently used persuasive techniques, broadly noting that reviewers might draw on their lay knowledge of persuasion to reinforce their viewpoint and establish their credibility as experts.

Prior research in persuasive communication suggests that there are key textual features that might influence the credibility and persuasiveness of a message. For example, Kardes (1988) and Sawyer and Howard (1987) suggest that implicit conclusions are expected to have a greater impact on involved consumers (and we might expect consumers reading consumer reviews to be fairly involved).² Similarly, we know that in general, two-sided messages are seen to be more persuasive than one-sided messages (O'Keefe 1999), and credibility-enhancing for the source (Kardes 2001).

² However, in a meta-analysis of this large body of research (O'Keefe 1997) which included non-advertising messages such as policy discussions, an overall significantly positive persuasive effect was found for explicit-conclusion messages.

Features of the source can also contribute to persuasiveness. If the source can be identified as 1) knowledgeable, and 2) similar to a receiver, s/he is better received. Source credibility in persuasion has been operationalized as both expertise (Hovland, Janis and Kelly 1953) and trustworthiness (Applbaum and Anatol, 1973; Hovland, Janis and Kelly 1953). Besides expertise—source attractiveness—established through similarity between the source and target, can also positively influence attitudes or behavior (Brock 1965). Interestingly, it has been shown that intensity or extremity of language (e.g. use of superlatives and forcefulness) tends to boost the credibility of the author as well as enhance the persuasiveness of a message (Hamilton, Hunter and Burgoon 1990). The use of subject-specific jargon might be another feature of persuasive messages that could be used to enhance their effectiveness.

METHOD

Content analyses have been used fruitfully in past investigations of consumer behavior (e.g. Belk 1987; Tse, Belk and Zhou, 1989). The primary benefit of content analysis is in helping to clarify “who says what in which channel to whom and with what effect” (Lasswell 1946, p. 37). One interesting recent use of this method analyzes how those who chat market themselves in online chat groups (Zinkhan et al 2003). Applied to marketing contexts, content analysis has lent itself productively to investigations of the actual content in communication, including a range of consumer “texts,” ranging from advertising to comics, enabling one to see differences in texts across culture and time (Tse et al. 1989), or across different categories of information (Belk and Pollay 1985; Belk 1987). We, in turn, use content analysis to contrast consumer reviews across different product categories: durable and non-durable, and new vs. old products.

Site selection

We chose to conduct our content analysis of reviews at Epinions.com for a variety of reasons. While it is difficult to make a definitive statement about its relative popularity among other sites of its kind, Epinions.com is perhaps the leading website for consumer-to-consumer reviews.³ The site carries more than a million consumer reviews for over a hundred thousand brands in over thirty product and service categories. The site carries two explicit measures of consumer influence: 1) it records the number of hits to specific reviews, from registered members as well as all visitors, and 2) members rate reviews on a four-point scale⁴.

A distinguishing characteristic of the site is that reviewers are actually rewarded (in kind and in cash) for reviews that are found useful. These ratings are used to give both psychological rewards in the form of "hall of fame" reviewer awards, as well as monetary payments on a regular basis. While the site does attract advertising and more recently, payment from large retail chains that allow comparison price shopping on products, the site operators emphasize that there is no censoring of reviews for unfavorable comments about a product. The guidelines to reviewers also stress that all that counts is usefulness, and that positive as well as negative reviews might be useful. Members of the site, who also gain the privilege to write reviews, are invited to rate reviews for usefulness.

Thirdly, the particular structure of the epinions website is actually designed to promote virtual word-of-mouth communities. Readers browse through many reviews, with visitor hits on specific consumer reviews duly recorded. If readers then opt to be members of the epinions.com community, they can choose to respond to specific reviews by rating the review or even writing a brief comment. As they become more regular readers, they may choose to share their growing confidence in a particular reviewer by naming themselves as

³ A repeated (across several months) search on google.com for "consumer reviews" consistently listed epinions.com as one of the top few picks.

⁴ These ratings are available for viewing only to registered members; registration for the site is open to all.

someone who trusts that reviewer. In turn, a specific reviewer can display a list of members he or she trusts. This explicit listing of mutual trustworthiness is aptly named the *Web of Trust*. Members can also review products, write reviews and earn e-royalties which later convert into cash. Finally, members can seek greater commitment and recognition in this virtual community as they become master product reviewers, labeled first as Most Popular Authors and Reviews, then distinguished as Top Reviewers and finally conferred the status of Category Leads. Those willing to mentor other reviewers can also be designated as Advisors. Each of these designations is reviewed every three months by the website.

Since its inception in 1999, epinions.com has drawn favorable press coverage in a number of popular, business and management, and e-commerce media (e.g. Fryer 2001). Based on these indicators of its immense appeal and utility among consumers, we chose the site to be the focus of our empirical work.

Coding

Using the economics of information literature, we coded the content of consumer reviews as follows: the number of search and experience attributes mentioned, related information such as the number of comparisons (across other products or previous versions of the same product) offered for search and experience attributes, reference to importance of specific attributes in the decision making process, verification of product claims, compatibility with other products, and references to usage situations (what kind of consumer or usage context the reviewed product was appropriate for).

Various findings about persuasion techniques guided the coding of the form of the reviews. We coded the consumer reviews on whether explicit conclusions were used, whether reviews were one-sided or two-sided, for reference to author's expertise and its source (i.e. whether expertise was derived from experience with the product category or brand or textbook knowledge), whether extreme language was used in the title or body of the

article and whether jargon was used. A list of all the codes and their definitions is in the appendix.

In a pilot, a small sample of reviews was selected and coded by a trained research assistant, with his coding serving to help fine tune our coding list. In the main study, a revised coding list was used (see appendix for variables coded and their definitions). Two research assistants were trained intensively to use the coding list to code the selected reviews. As a reliability check, several meetings were held in the initial stages to compare the coding of the same review by both reviewers to ensure that both coders were using a standard system of coding. To avoid confounding the design variables with the coders, and as a further reliability check, each of the two coders coded approximately half of the reviews within each of the twelve product categories. An inter-rater reliability analysis of the coding of the two coders across a sample of the coded reviews revealed an extremely high level of agreement between the two coders (over 90% for almost all the coded variables).

Sampling

We selected three product categories in each of the four cells of the 2 (introductory versus mature stage of the product life cycle) x 2 (non-durable versus durable) sampling design. The product categories chosen in each of these four cells are listed in Table 2. Within each category, the four most reviewed products were selected and a random sample of fifteen (across all selected products within each product category) of these brand reviews was selected for coding, resulting in a total of 180 reviews in our sample.

INSERT TABLE 2 HERE

FINDINGS

Descriptive Statistics

Across the entire sample of 180 reviews, the average length of a review was around 390 words⁵. Not surprisingly, reviews for products in the introductory stage of the product life cycle tended to be significantly longer than those for mature products (444 versus 341, the difference significant at the 0.05 level). Most reviews tended to be fairly positive, with around 85-90% of all reviews recommending the reviewed product. Also, on a five-star scale, the average product rating was fairly high at 4.25. On average, durables tended to be rated more highly than non-durables (4.4 versus 4.1, the difference significant at the 0.05 level).

Our analysis also revealed the extent of experience and popularity of the reviews in our sample. The average reviewer in this sample had written 85 different reviews at the site, and was “trusted” on average by 63 other members. His/her reviews (across all the various products that s/he reviewed) had been visited by over 40,000 visitors, including over 6300 members of opinions. Thus on a per-review basis, each review was read on average by over 600 visitors, inclusive of 74 members. Reviewers of products in the mature stage of the product life cycle were significantly (at the 0.05 level) more experienced than reviewers of new products (an average of 113 reviews written by the former, versus 58 written by the latter). Non-durable product reviewers tended to be more experienced as well as more often read than durable product reviewers.

(INSERT TABLE 3A HERE)

Content

The average total number of attributes mentioned per review was fairly high at around 13.5. This figure did not vary by product type (durable or non-durable, or new or mature). Models of multi-attribute decision making often cite the Miller rule-of-thumb (7 +/- 2 chunks of information) as a basis for determining the number of salient attributes involved in

⁵The Epinions site enforces a minimum review length of 100 words.

decision making. The reviewers may have included an unexpectedly high average number of attributes to be maximally helpful. An alternative reason could be that both they as well as the intended audience for the reviews are expected to be highly involved decision makers, and are hence motivated to process more information than the average consumer.

The average number of search attributes mentioned (either as description of product characteristics, verification of manufacturer claims or in comparison with other competing products or previous versions) was around 7.2, while the number of experience attributes was around 6.2. These did not vary greatly across product categories, except for a significantly higher number of experience attributes for non-durables compared to durables (6.9 versus 5.6, the difference significant at the 0.001 level).

In the body of the reviews, more search attributes were mentioned than experience attributes. The only exception was for non-durables for which there were marginally, but not significantly more, experience attributes. For durables and for new products, the number of search attributes was significantly higher than the number of experience attributes (8.0 versus 5.6, for durables, significant at the 0.001 level, and 7.4 versus 6.0 for new products, significant at the 0.01 level). We surmise that even for the reviewers, search attributes are easily obtained from readily available information on the product packaging or in the product manual⁶.

However, in the summary “pro” and “con” attributes that reviewers are asked to provide at the top of the review, the pattern was reversed, with the total number of experience attributes mentioned as either a pro or a con being significantly higher (at the 0.01 level for all four product types, durables and non-durables and new and old products) than the total number of search attributes. As expected, these consumer authors recognized that other consumers are looking for vicarious experience information as critical information in the

⁶ Search information after all is easily available externally, whereas experience attribute information has to be self-generated by the reviewers.

evaluation of a product. Such experience information would either be unavailable or less believable from marketer-driven sources.

The importance of experience attributes was corroborated by almost half of all reviews offering some comparison on experience attributes. A little fewer than 30% of all reviews offered search attribute comparisons of the reviewed product with other competing products. Comparisons with previous versions or models of the reviewed brand were scanty, at around 7%. For non-durables, the tendency to offer comparisons on experience attributes was significantly higher (59%, versus 38% for durables, significant at the 0.001 level).

Almost half of all reviews also made some mention of an attribute that the reviewer considered important – the figure rose to 59% for durables (significantly different at the 0.001 level, from 39% for non-durables). Around 40% of all reviews mentioned compatibility issues (i.e. whether or not the reviewed brand was compatible with complementary products or previous models); expectedly, this figure was higher for new products, with over 50% of these reviews mentioning compatibility.

A key final feature of the reviews was the extent to which the majority of reviewers (64%) sought to increase the relevance of their reviews by mention of an appropriate usage situation for the product. About 40% mentioned the kind of consumers (novices, for instance) for whom the product might be appropriate, while about 46% suggested usage contexts, such as lightweight digital cameras being useful at family outings. For non-durables, the proportion of reviews targeted at typical consumers was significantly higher than for durables (52% versus 27%, significant at the 0.001 level).

(INSERT TABLE 3B HERE)

Form

In line with the overwhelmingly positive nature of the recommendations and ratings found in the consumer reviews, we found that 88% of all reviews made the conclusions of

their review explicit, almost always in favor of the reviewed product. For mature products, this percentage was as high as 93%, significantly higher at the 0.05 level, than for newer products, for which the proportion was 84%. This particular finding is intriguing because as lay persuaders, these reviewers opt for straightforward explicit conclusions.

While the conclusions were explicit, the majority of the reviews tended to be two-sided, listing positive as well as negative features of the reviewed product. Thus, if we assume that authors write these reviews, with the intent that other consumers would read them, find them credible and use their recommendations, there seems to be the clear realization that presenting a balanced view of the product is much more likely to be helpful to a potential consumer reading the review. Of course, it could also just be that all products have pros and cons, and since these authors are not likely to be as biased as an advertisement or salesperson pitch for a product, they routinely reported both sides of a product.

The findings about source expertise demonstrate that the reviewers (in as many as 48% of the reviews) made some mention of their expertise in the product category. Such justifications included prior experience with the product (46%), and/or the brand (20%) and other professional theoretical knowledge (around 6%), such as training as a chemist which informed knowledge about ingredients in an anti-aging product. With non-durables, for which experience is presumably less costly to acquire, the proportion mentioning expertise (especially with the product) was significantly higher (58% versus 34% for durables, difference significant at the 0.001 level). Not surprisingly, for mature products, reported expertise with the brand was higher, relative to newer products (27% versus 13%). Thus, unlike other third-party sources such as *Consumer Reports* magazine, in which professional expertise is expected, the main source of expertise of consumer reviewers is their prior experience with the product or brand. Consumer reviewers clearly recognize the need to reveal this expertise to potential readers.

Lastly, only around 30% of the reviews used extreme language in the body of the review, while an even lower proportion of 22% highlighted the title with extreme language. This is perhaps a recognition that the use of superlatives in a consumer-consumer review might serve as a tip-off about an unbalanced and hence unhelpful review. Around a third of all reviews used jargon, the figure rising to 44% for new products.

(INSERT TABLE 3C HERE)

Regression Results

Registered members of the site are invited to rate each individual review that they choose to read on a four point scale: not helpful, somewhat helpful, helpful and very helpful. Assuming that this scale approximates an interval scale, we calculated an average rating for each of the reviews in our sample and then regressed this average on the various review characteristics, using a number of variables measuring both form and content of these reviews. We also included some expected covariates, such as the popularity of the reviewer (in terms of the total number of visits that this reviewer's contributions had received). The results of the regression analysis are in Table 4.

Not surprisingly, the length of the review tended to be correlated with many of the "content" variables such as number of search and experience attributes. While the length of the review was also highly correlated with the average rating (i.e. longer reviews were found to be rated as more helpful than shorter reviews), we left this variable out of the regression analysis because of its collinearity with many other conceptual independent variables of greater interest.

It must be noted that the vast majority of ratings of the reviews were either "helpful" or "very helpful;" this restriction in range of the reviews may have artefactually lowered the correlations with the independent variables. The significant explanatory variables in this regression (which had an R^2 of 0.34) were stage in the product life cycle (newer product

reviews were rated as less helpful than older product reviews, significant at the 0.1 level), number of search attributes (significant at the 0.01 level), comparison of reviewed product with other products on experience attributes (significant at the 0.05 level), mention of attribute importance (significant at the 0.1 level), use of two-sided arguments (significant again at the 0.1 level), self-identification as an expert, and identification of suitable usage situations for the product (both significant at the 0.05 level), and not surprisingly, the total number of visits by all visitors (members and non members) to all reviews of the reviewer, which serves as an overall index of popularity of the author (significant at the 0.05 level). None of the other variables in the regression were significantly related to the helpfulness rating.

(INSERT TABLE 4 HERE)

DISCUSSION

The main objective of our study was to understand the content of consumer reviews, and the form in which they are delivered online in terms of the specific persuasion methods used. We contrasted the reviews by a 2 x 2 factorial design, comparing reviews for products in the introductory phase versus the mature phase of the product life cycle, and non- durables versus durables. Finally, we examined the impact of these content and form variables on the perceived helpfulness of the reviews through a regression analysis. In this concluding section, we review the main findings of the empirical analysis and discuss how they relate to the various theoretical ideas that motivated our coding.

Our analysis involved making a large number of comparisons of dependent variables across the two design factors of the studies⁷. Many useful findings emerge from this analysis about the content of consumer reviews:

⁷ The usual caution one should adopt in choosing a conservative level of significance when performing multiple tests of significance should be moderated by the descriptive nature of this study.

- reviewers stress experience attributes in summarizing the advantages and disadvantages of products, particularly so for non-durables. Almost half of all reviewers offered comparisons of other products on experience attributes.
- a large number of search and experience attributes, averaging 13 across the reviews, and consistently the same number across different types of product categories, were cited.
- a fairly large proportion of reviewers, around 50%, offered comparisons of a target brand with other competitors.
- only a small proportion of reviewers seem to recognize the value of explicit mention in verifying manufacturer claims. Third party sources such as *Consumer Reports* may have to continue to play that role.
- a fairly large proportion of reviewers, around 50% provided advice or input on attributes that were or should be considered important in making a decision in the product category. Thus, consumer reviews may influence not just the beliefs of consumers about attribute levels, but also evaluations of these beliefs.

As discussed earlier in the paper, methodological problems with researching WOM communication in real time have resulted in the relative paucity of prior research about the content of the communications. While there are clear differences between conventional “offline” WOM and consumer reviews as a variant of WOM communication, this content analysis has been able to demonstrate the results of unobtrusively listening in on the “voice of the customer.”

The expectations that we had about these reviews being able to address those aspects of information search which cannot be credibly acquired from manufacturer sources were largely borne out. In this kind of WOM communication, we now know that a lot of attribute information is shared, that there is a stress on experience attributes, that these are more

important for non-durables than for durables, that other information helpful to decision making such as attribute importance and appropriate types of consumer usage situations are also shared. Of course, consumers also provided a lot of search information (which is available elsewhere on the internet and offline), generally referencing a greater number of search attributes than experience attributes; but critically, when summarizing the pros and cons of the reviewed product, reviewers stressed experience attributes significantly more often.

Also interesting are some expectations that were not fulfilled; only a small proportion of reviewers attempted to verify manufacturer claims, especially for search attributes. This could well be because an objective verification of search attributes might be beyond the capabilities of consumer reviewers, who do not have access to the laboratories used by third party sources such as *Consumer Reports*.

Analysis of the form of the consumer reviews shows some support for the propositions of Friestad and Wright (1994, 1995) about lay persuasion knowledge. Reviewers seem to appreciate the need to affirm their credibility in influencing the recipient of their reviews. A large proportion of them, almost 50%, made the effort to identify the source of their own expertise to the readers. Additionally, over 60% of all reviews adopted a two-sided approach in writing the reviews, pointing out both pros and cons of the reviewed product in the body of the review. Of course, to some extent, the two-sidedness may have also been caused by a recently instituted requirement of the epinions site to summarize the pros and cons at the beginning of each article. We did not find the use of implicit conclusions very common (even though the reviewers could have expected their audience to be fairly involved). In fact, since one heading at the top of the review asks reviewers to state the “Bottom Line,” reviewers were more explicitly cajoled into explicit recommendations.

Clearly epinions.com works from the premise that explicit conclusions are more helpful in information search than unstated conclusions.

The main differences in content between non-durables and durables related to the number and type of references to experience attributes. Non-durable products elicited significantly more experience attributes, more comparisons of other products on experience attributes, more verification of experience attributes, and more experience attributes mentioned in the summary pros than for durables. For durables, on the other hand, there were significantly more comparisons of search attributes, verifications of search attributes, and more search attributes mentioned in the summary pros. The percentage of reviewers referring to attribute importance as well as the average number of attributes cited as being important were significantly higher for durables. Reference to the types of consumers that the product would be suitable for were more common for non-durables. In summary, sharing of information on experience attributes seems to be particularly important for non-durables. This is further borne out by the significantly higher proportion of non-durable product reviewers who mentioned their product expertise in terms of either experience in the product category or with the particular brand being reviewed.

Perhaps for these reasons, the use of consumer reviews in the decision making process is even more prominent for non-durables, as reflected by the higher number of reviews written by non-durable product reviewers in our sample, the higher number of visits that their reviews generated and the higher number of members who “trusted” their reviews.

The content and form of reviews for new and older products revealed few differences, an exception being that a significantly higher proportion of reviewers raised compatibility issues for new products, as might be expected, than for mature products. Interestingly, explicit conclusions were used more often in reviews of older products, perhaps reflecting greater confidence.

In some ways, the regression analysis served to compare the expectations of the reviewers about what would be helpful with the actual perceived helpfulness of these features. Our regression analysis revealed that while the sheer amount of information provided was an important determinant of helpfulness, specific form and content cues were also quite important. In particular, helpful information included the provision of product comparisons on experience attributes, the mention of which attributes are important, and indications of usage situation appropriateness. Also, form variables such as the identification of the expertise of the author and the use of two-sided arguments were also perceived to be helpful. Thus, there does seem to be some match between the authors' expectations of what would be useful and readers' actual evaluations of what would be useful.

Theoretical Contributions and Future Research Directions

The special nature of online consumer reviews- consumer to consumer communication written to be helpful about product experiences- has allowed us to draw together three fairly independent streams of research – word of mouth behavior, information economics, and persuasion research. In this final section, we review the theoretical and managerial implications of our work, and the many interesting directions for future research suggested by our framework and findings.

The analysis of the content of these consumer reviews reveals reviewers who exhibit a fairly sophisticated understanding of the expectations that other consumers might have. Online consumer reviews may be likened to WOM drawn from a virtual community of consumers. Among the sites already mentioned, consumerreviews.com, for instance, proudly stresses that 18 vertical communities of consumers have emerged on their site. And as our findings indicate, on average, consumer reviews at epinions.com tend to be read by large numbers of visitors and registered members, many of whom profess to “trust” the reviewer. So while not directly comparable to conventional word of mouth (WOM) communications,

these Internet reviews do record consumers communicating to other consumers about their positive or negative experience with products and services, mimicking the social ties of oral WOM by building networks of participants who share a common goal of consumer education built on mutual trust.

Do these findings generalize to other kinds of WOM information sharing behavior? Since there is not much prior research on the content of WOM communication in the offline counterpart, we can only speculate about this. It is not clear whether the amount of information that would be exchanged would be greater (because of the ease of conversation as opposed to writing) or lesser (because a written format allows for a reviewer to think through their recommendation and systematically record their thoughts about the product). However, *prima facie*, there appears to be little reason to doubt that the type of information that would be shared would be different – if offline WOM sources share the motivations of online reviewers, they could be expected to share the same emphasis on experience attribute information and other types of information not likely to be credibly obtained from marketer driven sources.

Interestingly, the vast majority of consumer reviews in our sample were positive reviews, recommending the reviewed product. The relative lack of negative product reviews may be because of a variety of reasons – that there are other specific complaint sites (e.g. untied.com, which archives complaints about United Airlines) that might be competing for such reviews, that when writing to an anonymous audience, consumers like to appear to have made smart choices, or that they perhaps wrongly perceive that positive reviews are more helpful to decision makers than negative reviews. Offsetting this somewhat was the relative prevalence of two-sided (as opposed to one-sided) reviews, which cited both positive and negative characteristics of the reviewed product. Understanding the motivations of online

consumer reviewers relative to offline WOM sources could be an interesting avenue for future research.

Our content analysis also adds to the growing literature on information search on the Internet. Our further classification of kinds of search and experience attribute information (attribute information, attribute comparisons with other products or with previous versions, attribute verifications) could fruitfully be used in other studies of information search. In this study, we found little mention of attribute verification, but varying degrees of comparisons of search and experience attribute information for different kinds of product categories. Future theories of information search could build on our study to develop a broader framework of pre-purchase search, allowing for specific sources to be used for various components of the decision making process, especially on the Internet. For example, a web banner could evoke a felt need, electronic recommendation “agents” could be used to develop consideration sets, manufacturer sites to acquire search attribute information, consumer review sites to acquire experience attribute information, and sites of publications like *Consumer Reports* to acquire verification information. More broadly, the stages in the decision making process, online or offline, in which various information sources are used could be a fruitful avenue of investigation for both academic and managerial researchers.

Finally, our research has shown that consumers seem to have a reasonably sophisticated understanding of the influence or persuasion process. They realize the importance of establishing their credibility as communicators by establishing the source of their expertise. They turn to strategies such as recounting prior experience or using two-sided modes of argument to enhance their credibility; the regression analysis interestingly showed that these variables pertaining to the form of the review definitely enhanced the perceived helpfulness of the reviews.

There remain many other fruitful areas of study with these reviews. Many of the following research studies may be pursued by a similar content analysis of a carefully selected sample of product categories for contrasting various types of product categories:

- insights about the decision making process can be gleaned by a careful coding and analysis of the reasons provided for the purchase (e.g. to what extent do consumers use compensatory versus non-compensatory models of decision making)
- differences between reviews of succeeding generations of the same product can be studied in a longitudinal study across these products to understand the evolving diffusion of the importance of specific attributes that play a role in decision making in a category
- differences in form and content between reviews of “shopping” and “luxury” goods, as other types of product information (“image” or “prestige” value of the products) might surface
- characteristics of communications of online opinion leaders (such as the “category leads,” “top reviewers,” etc. at epinions)
- specific reactions to new product innovations, for example various types of risks (financial/social/physical) that might be referenced, and expectations of later versions of the innovation
- laboratory studies of consumer reactions to consumer reviews at these review sites, relative to consumer testimonials used in advertising
- effects of the structure of different consumer review sites on the form and content of these reviews (e.g. review sites that force a summary of pros and cons, versus those that do not such as the book reviews at amazon.com).

Managerial Implications

For marketing researchers, this vast ever-growing source of qualitative research data could be used in a variety of ways. At a very obvious level, these consumer reviews are comparable to transcripts of in-depth interviews with recent purchasers of a target brand. Much useful information such as the specific attributes that were considered in decision making, the specific brands and previous versions of the same brand that were compared, the manufacturer claims that needed to be verified by the consumer, changes in these patterns across time, as a product's penetration increases across time, can all be gleaned by the adoption of appropriate coding schemes and analysis. Also, comparisons of reviews between brands competing in the same category can highlight the relative strengths and weaknesses of these brands as perceived by a highly involved set of users. Insights into the perceived positioning of the reviewed brand may also be obtained by a careful study of the types of comparisons made by reviewers themselves within the reviews.

On many review sites, there is also useful information available about the background of the reviewer – age, employment status, marital and family status, gender, location etc. Thus, a variety of segment level differences can also be uncovered by a careful coding of these characteristics.

Interestingly, Thompson (2003) reports that a pragmatic use that some manufacturers have found is to identify potential opinion leaders at these sites and target them directly by sending them offers of free products. This article indeed points out the Epinions site as an example of sites where companies have targeted members. It is not clear that this is a good strategy in the long run, as the foundation of the trustworthiness of these sites relies on the reviewers being independent. A very useful source of free market research information may be irretrievably compromised if the practice of targeting individual reviewers became more widespread; given the nature of the Internet, it would take very little time for news of such a practice to spread, reducing the status of these sites to that of advertising by the manufacturer.

For the same reason, it is also probably advisable for the manufacturers not to use quotes from these sites in their advertising campaigns. Instead, as our study reveals, marketers need to better communicate the “experience” attributes enjoyed by their brands, especially for non-durable products, perhaps by specifying more clearly in the advertising the process through which the combination of various search attributes and R&D contribute to the actual experience attributes (e.g. what specific omissions and inclusions of ingredients in shampoo lead to a specific effect of the ultimate product).

Limitations

A limitation of generalizing the findings from a sample of consumer reviews to the general population at large may currently come from the low penetration levels of the Internet in some demographic segments, such as seniors and minorities. Also, the consumers writing and reading these reviews are likely to be more highly involved in the product category than the average consumer. However, in many countries around the world, Internet penetration continues to spread fairly rapidly; in these countries (such as South Korea, and many European countries), representativeness of the sample may not be a problem. Also, even where e-commerce is slow to take off because of privacy or security concerns (as in Singapore), consumers still use the Internet extensively as a research tool. Thus, current limitations may slowly dissipate in the foreseeable future. And for some demographic or psychographic segments, and for some technological products, especially for computer hardware and software related products, where the average consumer is likely to be Internet savvy, and fairly involved, a sample of reviews might well approximate a very good representative set of consumer opinions.

Further, the ease of searching for information within consumer review sites and the sheer quantity of opinions available might well lead to these reviews slowly supplanting conventional WOM as the primary non-marketer driven source of information. A critical

advantage of consumer review sites exists for the average consumer whose social network may not include users or experts on every single product category and brand. The context set of brands and products reviewed in consumer review websites is much larger than would ever be likely through WOM, enabling consumers to get a much better sense of the relative merits of different brands by reading reviews across brands.

Thus, in spite of a few current limitations, the continued study of online consumer reviews by both academic researchers and marketers has tremendous potential for revealing both theoretical and practical insights into consumer search and the consumer decision-making process.

TABLE 1

Three sources of independent product information

	Conventional Word of Mouth	Third party sources such as <i>Consumer Reports</i>	Consumer reviews
Type of communication	One-one; face-face	One-many; print	One-many; online
Credibility to consumer (relative to advertising)	High	High	High
Source of expertise of “author”	Usually available	Usually available	Often indicated by the author
Visibility to consumer	High only for intended recipient	High	High
Visibility to marketer	Low	High	High
Life of communication	Temporary	Relatively permanent	Permanent
Interactivity	High	Low	Medium
Relevance of reviewer experience (“is this communicator like me?”)	Usually High	Questionable	Varies, but likely that at least some reviews will be by similar consumers
Immediacy	High	Limited by publication schedule	High
Variety of opinions	Restricted by social circle	Typically just one	High
Size of context set: number of competitive models on which opinions available	Restricted by experience of social circle	Limited by publication space	Extremely high
Ease of search	Varies	Limited by publication schedule	High

TABLE 2**Sample design (n=15 in each product category)**

		Stage in Product life cycle	
		Introductory stage	Mature Stage
Type of product category	Non-durable	<ul style="list-style-type: none">• Weight gain bars• Soft disposable lenses• Anti-ageing treatment	<ul style="list-style-type: none">• Shampoo (normal hair)• Beer (lager)• Acne and blemish cream
	Durable	<ul style="list-style-type: none">• DVD recorder• Baby monitor• Digital camera	<ul style="list-style-type: none">• Point and shoot camera• Video cassette recorder• Microwave oven

TABLE 3A#.

Summary of Content Analysis of Consumer Reviews (N=180)

	All	Stage in Product Life Cycle		Type of Product	
		Introductory	Mature	Non-durable	Durable
Overall Review Characteristics – Descriptive statistics					
Number of reviews	180	90	90	90	90
Average length in words	392.51	444.33	340.68 ^c	395.20	389.81
Average word length (letters)	4.35	4.36	4.34	4.37	4.32
Average product rating	4.25	4.38	4.12 ^d	4.10	4.40 ^c
Average number of visits	41067	24503	58026	45154	37075
Average number of member visits	6373	4942	7838	9222	3590 ^d
Average number of review s written	85.1	57.8	113.1 ^c	108.0	62.7 ^d
Average number of members trusting reviewer	63.4	57.6	69.3	88.5	39.0 ^c

The cells in tables 3A, 3B and 3C are the averages or proportions (indicated by % in parentheses in the first column) of the variables coded in the content analysis. The superscripts in the table entries in Tables 3A, 3B and 3C denote statistically significant rejections of hypotheses of no difference in two-tailed tests of differences between the subscripted mean or proportion and the mean or proportion of the other level of that factor. E.g. the superscript d against the average product rating for mature products indicates that the mean was significantly different from that for introductory stage products at the 0.1 level of significance. The levels of significance are notated as follows:

^a significant at the .001 level ^b .01 level ^c .05 level ^d .1 level

TABLE 3B.

Summary of Content Analysis of Consumer Reviews (N=180)

	All	Stage in Product Life Cycle		Type of Product	
		Introductory	Mature	Non-durable	Durable
Informativeness Characteristics – Content					
Whether recommended (%)	88.33	90.00	86.67	85.56	91.11
Average number of search attributes	7.23	7.40	7.07	6.49	7.98
Average number of experience attributes	6.24	5.99	6.50	6.91	5.58 ^a
Average number of all attributes	13.48	13.39	13.57	13.40	13.56
Comparison of search attributes – other products (%)	27.78	28.89	26.67	21.11	34.44 ^c
Comparison of search attributes – previous versions (%)	6.67	5.56	7.78	3.33	10.00
Comparison of experience attributes – other products (%)	48.33	47.78	48.89	58.89	37.78 ^a
Comparison of experience attributes – previous versions (%)	6.67	4.44	8.89	5.56	7.78
Verification of product claim - search (%)	5.0	2.22	7.78 ^a	3.33	6.67 ^a
Verification of product claim - experience (%)	12.78	12.22	13.33	22.22	3.33 ^a
Summary “Pros” – search	0.72	0.59	0.86 ^d	0.42	1.02 ^a
Summary “Pros” – experience	1.44	1.47	1.41	1.68	1.20 ^a
Total “Pros”	2.16	2.06	2.26	2.10	2.22
Summary “Cons” – search	0.43	0.47	0.39	0.42	0.43
Summary “Cons” – experience	0.64	0.73	0.56	0.56	0.73
Total “Cons”	1.07	1.20	0.94 ^d	0.98	1.17
Mention of attribute importance %	48.89	52.22	45.56	38.89	58.89 ^a
Average number of mentions of attribute importance claims	0.72	0.73	0.70	0.51	0.92 ^a
Mention of compatibility (%)	42.78	52.22	33.33 ^b	45.56	40.00
Usage situation mention (%)	64.44	70.00	58.89 ^d	71.11	57.78 ^c
Who it is for	39.44	40.00	38.89	52.22	26.67 ^a
What context it is for	45.56	48.89	42.22	46.67	44.44

TABLE 3C.**Summary of Content Analysis of Consumer Reviews (n=180)**

	All	Stage in Product Life Cycle		Type of Product	
		Introductory	Mature	Non-durable	Durable
Persuasiveness Characteristics – Form					
Explicit conclusion (%)	88.89	84.44	93.33 ^c	86.67	91.11
One-sided review (%)	39.44	41.11	37.78	40.00	38.89
Expertise reference (%)	48.89	48.89	48.89	57.78	40.00 ^a
Expertise with product (%)	45.56	43.33	47.78	56.67	34.49 ^a
Expertise with brand (%)	20.00	13.33	26.67 ^c	24.44	15.56 ^d
Theoretical knowledge (%)	6.11	6.67	5.56	3.33	8.89 ^c
Extremity in body	28.33	33.33	23.33	26.67	30.00
Extremity in title	22.22	27.78	16.67 ^d	20.00	24.44
Use of jargon (%)	37.22	44.44	30.00 ^c	37.78	36.67

TABLE 4.**Factors affecting “helpfulness” rating: regression results**

Variable	Predicted sign	Parameter
Intercept	None	2.96 ^a
Nondurable/durable	None	0.08
Mature/Introductory	None	-0.15 ^d
Interaction of product type and life cycle factors	None	0.10
Total number of search attributes	+	0.01 ^b
Total number of experience attributes	+	0.00
Number of search attributes summarized in “pros and cons”	+	-0.03
Number of experience attributes summarized in “pros and cons”	+	0.01
Verification of search attributes*	+	0.15
Verification of experience attributes*	+	-0.03
Comparison of other products on search attributes*	+	0.02
Comparison of previous versions on search attributes*	+	-0.07
Comparison of other products on experience attributes*	+	0.13 ^c
Comparison of previous versions on experience attributes*	+	0.12
Mention of attribute importance*	+	0.08 ^d
Explicit conclusion*	+	0.04
Two-sided argument*	+	0.10 ^d
Whether recommended*	+	0.06
Self-identification as expert*	+	0.15 ^c
Identification of suitable usage situation*	+	0.14 ^c
Identification of suitable type of consumer*	+	0.07
Use of jargon*	None	0.04
Use of extreme language in body of review*	+	0.09
Use of extreme language in text of review*	+	-0.03
Total number of visits to reviews by author	+	0.00 ^c

*dummy variable

Note: The subscripts denote significance tests for H: parameter=0; where sign is predicted, the test is one-tailed and where no sign is predicted, the test is two-tailed;

^a significant at the .001 level ^b .01 level ^c .05 level ^d .1 level

APPENDIX

Content Analysis of Consumer Reviews – Coding List

I. REVIEW INFORMATION

- i. Review Number
- ii. Product Category: e.g Digital Camera
- iii. Brand / Model e.g. Canon A50
- iv. Reviewer's ID
- v. Date of Review
- vi. Date of Update (if any)
- vii. Product Rating :(1 star = 1; ½ star = 0.5, maximum rating=5 star)
- viii. Review Rating: [1] Not helpful; [2] Somewhat helpful; [3] Helpful; [4] Very helpful
- ix. Recommended: whether recommended for purchase or not
- x. Length (in words)
- xi. Length (in characters without spaces)
- xii. Number of Paragraphs
- xiii. Number of reviews written by reviewer
- xiv. Number of members who “trust” the reviewer
- xv. Total number of visits received by reviews written by reviewer (at the time of the coding)
- xvi. Total number of member visits received by reviews written by reviewer (at the time of the coding)

II. INFORMATIVENESS - Content

1. Types of Claims & Evidence
 - a. Search Attributes: count of factual claims like product features, price, functions.
 - b. Comparison of Search Attributes: whether product was compared to other products, earlier versions of the same product or not at all
 - c. Experience Attributes: count of claims like ease of use or ease of assembly
 - d. Comparison of Experience Attributes: whether compared to other products, earlier versions of same product, both or no comparison
 - e. Verification of Product Claims: count of product claims actually verified by reviewer – separated by search and experience attributes
 - f. Comparison of Verification of Product Claims: whether compared to other products, earlier versions of the same product, both or not at all
 - g. Number of search and experience attributes mentioned in the summary “pros” and “cons” at the top of the review
 - h. Attribute-Importance: whether the reviewer mentions the importance of on specific attributes when purchasing a product, and count of number of such attributes
2. Mention of Appropriate Usage Situation: whether mentioned or not
3. Compatibility in Wider Consumer Context: whether compatible with other products
4. Mention of usage situation – either type of consumer or usage context particularly appropriate for the reviewed product

III. PERSUASION - Form

1. Explicit Conclusion: whether absent or present
2. Location of Explicit Conclusion: whether absent, at the beginning , end or both ends of review
3. One-Sided vs. Two-Sided Reviews: whether an opposing viewpoint is included
4. Expertise of Source: whether expertise of the reviewer is referred to (where referred to, almost all reviewers identified them as experts rather than as novices in our sample)
5. Source of Expertise (where referred to): experience with product category, or brand
6. or technical know-how / book knowledge
7. Intensity / Extremity: whether the speaker's position is indicated through forceful, emotional or evaluative language
8. Presence of Extremity in Body of Review: present or absent
9. Presence of Extremity in Title: whether present or absent
10. Use of Jargon / Specialized Terminology: whether present or absent

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